



25.87 MILLION HECTARES

That is the size of forest missing from the latest assessment of India's green cover. Does this land exist? Is it encroached upon? Or is it just degraded; so degraded that there are no forests to be counted here?

An analysis by **SUNITA NARAIN**





Some four decades ago, in the mid-1980s, the National Remote Sensing Agency, Hyderabad, prepared a report on India's forest cover using satellite imagery. The report compared the forest cover between 1972-75 and 1980-82, and found that the country had lost 1.3 million hectares (ha) of forests every year in this seven-year period. This estimate was way higher than what was projected each year by the forest department, and shocked the country. For the first time, there was a visual overview of the state of forest cover from the sky, which had shown a decline. It spurred action and kick-started conservation and afforestation in the country. Soon, the Forest Survey of India (FSI), Dehradun, was tasked with producing an assessment of the country's forest wealth every two years.

Such a report is critical because it reflects the health of forests, which is crucial for livelihood, economic growth and carbon sequestration—in that order—for a country like India. The bulk of the country's forests are the habitat of its poorest people.

Since 1988, when FSI produced the first "State of Forest Report 1987", the capability of satellites and of interpretation of forests has improved substantially, but the same is not the case with the state of the country's forest cover. Let me explain this.

"India State of Forest Report 2021" (ISFR 2021), released on January 13, 2022, shows a minimal increase of 0.16 million ha (0.2 per cent) in the forest cover between 2019 and 2021 (see 'Negligible increase' on p28). The quality of forests also seems to have been stable. There is, in fact, some increase in the "very dense" forest category (with canopy cover of over 70 per cent) and in the "open" forest category (canopy cover 10-40 per cent), and almost an equal decrease in the





moderately dense forest category (canopy cover 40-70 per cent). You could argue that this does not merit analysis—criticism or boast. But the fact is that (i) more forests are now growing outside than inside the recorded forest area (forest land under control of the state government’s forest department); (ii) most forests are now concentrated in areas classified as “tribal” by ISFR 2021; (iii) reported forest area is increasing by counting trees outside the forest; and (iv) even the forest stock is growing outside the recorded forest area. Let’s analyse these one by one.

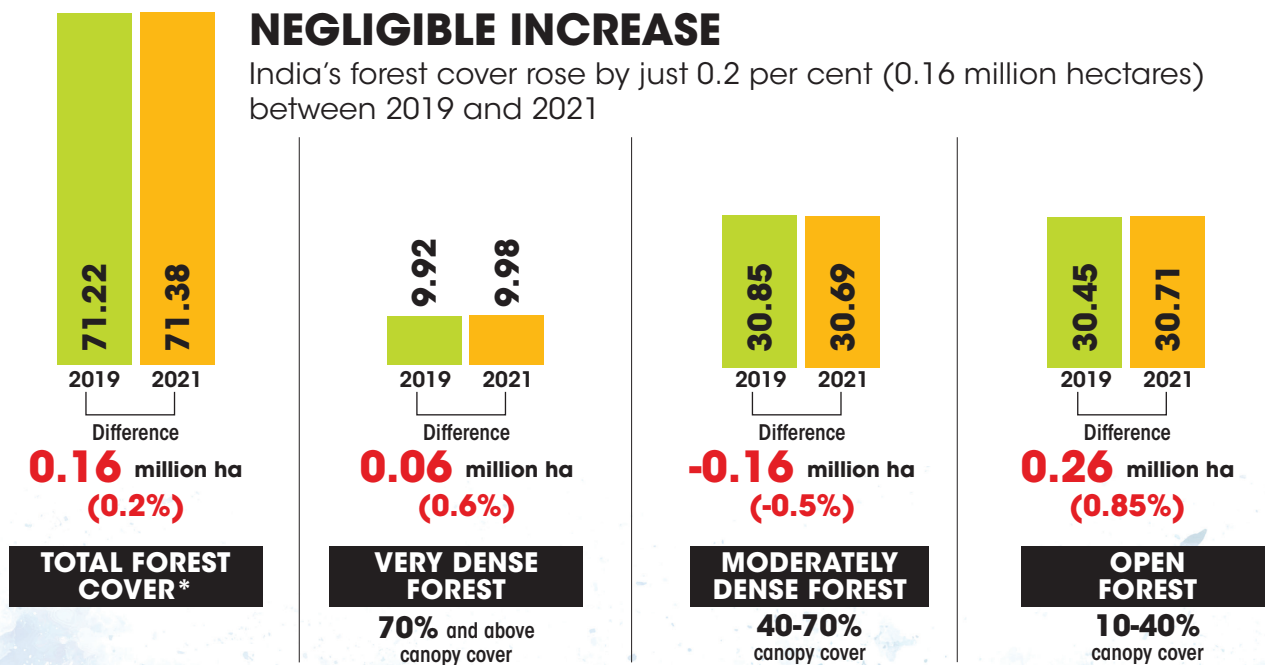
FORESTS GROWING ‘OUTSIDE’ AND IN ‘OPEN’

An assessment of forest cover outside the recorded forest area was first done as part of ISFR 2015. In other words, this was the first report to assess forests outside of the land under control of the state government’s forest department.

Initially, in absence of digitised

NEGLIGIBLE INCREASE

India’s forest cover rose by just 0.2 per cent (0.16 million hectares) between 2019 and 2021



* Forest cover is all land of more than 1 ha with over 10 per cent free canopy density; Source: India State of Forest Report 2021

OUTWARD GROWTH

Increase in forest cover inside recorded forest area between 2019 and 2021 has been insignificant, while the growth outside is 0.76%, driven primarily by open forests

RECORDED FOREST AREA (RFA*)	FOREST COVER# INSIDE RFA (in million ha)			FOREST COVER OUTSIDE RFA (in million ha)		
	2019	2021	% change	2019	2021	% change
Very dense forest (70% and above canopy cover)	8.73	8.77	+0.48	1.19	1.20	+1.4
Moderately dense forest (40-70% canopy cover)	24.07	23.96	-0.46	6.78	6.73	-0.71
Open forest (10-40% canopy cover)	18.86	18.93	+0.38	11.58	11.78	+1.62
Total forests	51.66	51.66	+0.00	19.55	19.72	+0.76

*RFA: All areas recorded as 'forests' in government records, and consists of Reserved Forests and Protected Forests; #Forest cover: Any land more than 1 ha with over 10% tree canopy density; Source: India State of Forest Report 2021; Note: Numbers may not sum to the totals indicated due to rounding off

boundaries of state forests, this was done by taking the topographical sheets of Survey of India, which include areas called “green-wash”—shown in green—and correspond “by and large to the recorded forest area of the country”. In this way, the assessment could differentiate between forests within the recorded area and outside. By the time ISFR 2021 came out, 24 forest departments had provided digitised boundaries of the forest areas in their records, which has further improved this assessment.

ISFR 2021 shows that close to 28 per cent of the forest cover is outside the recorded forest area. About 12 per cent of the very dense category of forests is also outside the recorded areas. The report also shows that the increase in forest cover between 2019 and 2021 has happened primarily because of the growth outside the recorded area. While the forest cover within recorded forests area has witnessed negligible increase, the growth outside has been 0.76 per cent (see ‘Outward growth’). This growth is primarily

due to the increase in the open forest category. As of 2021, as much as 11.78 million ha of forest cover—16.5 per cent of the total forest cover in the country—is in the open forest category outside recorded area.

The lopsided growth is because of a controversial definition of forest cover. According to FSI, any hectare of land with tree canopy density of 10 per cent or more is defined as forests. Roughly 40 per cent of the open forests are in the outside recorded areas and in all probability, this is where the tea, coffee or other private plantations would be counted as part of forest cover.

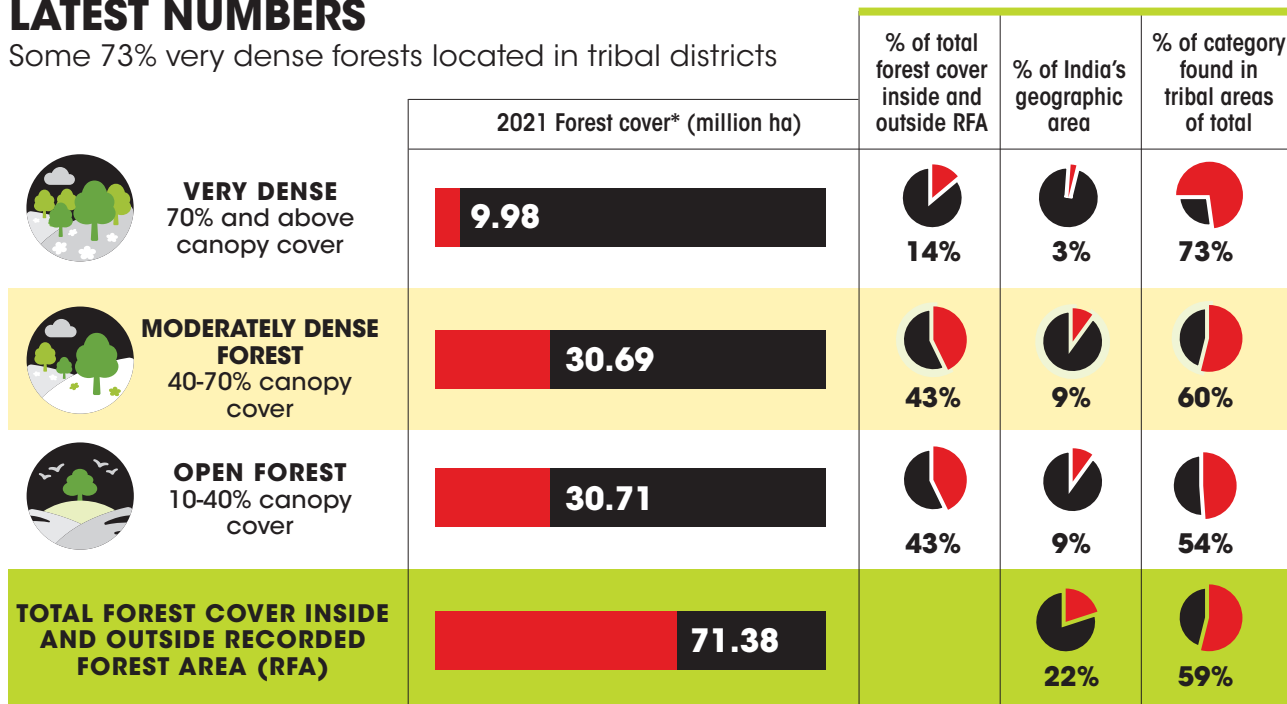
STABLE FORESTS, BUT WHERE?

In 2021, India’s total forest cover added up to 71.38 million ha, which is 22 per cent of the country’s geographical area. In terms of categories, the very dense forest (canopy cover of 70 per cent or more) constitutes roughly 10 million ha (about 3 per cent of the country’s land), while moderately dense forest and open forest are around 30 mil-

India State of Forest Report 2021 shows that close to 28 per cent of forest cover is outside the recorded forest area; 12 per cent of the very dense category of forests is also outside the recorded areas

LATEST NUMBERS

Some 73% very dense forests located in tribal districts



*Forest cover is all land of more than 1 ha with over 10% tree canopy density; *RFA: All areas recorded as "forests" in government records, and consists of Reserved Forests and Protected Forests; Source: India State of Forest Report 2021

lion ha (or 9 per cent) each.

What is important to note is that this forest wealth—about 60 per cent of total forest cover and 73 per cent of the very dense forests—is concentrated in districts classified as “tribal” by ISFR 2021. These districts are listed under Schedule V of the Constitution as habitats of Scheduled Tribes. These 218 districts, covering states of the Northeast and located in parts of central India, highlight the resource curse of the richest lands being the habitat of the poorest. These also indicate the urgent

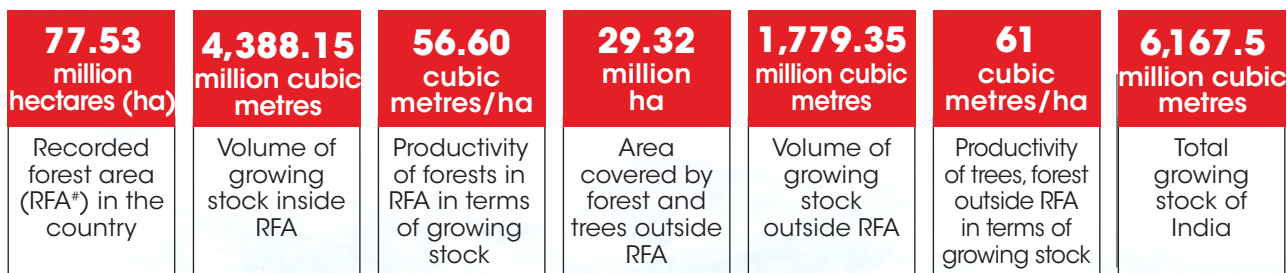
need to link livelihoods of communities with forest protection.

ADD UP TREES FOR GOOD NEWS

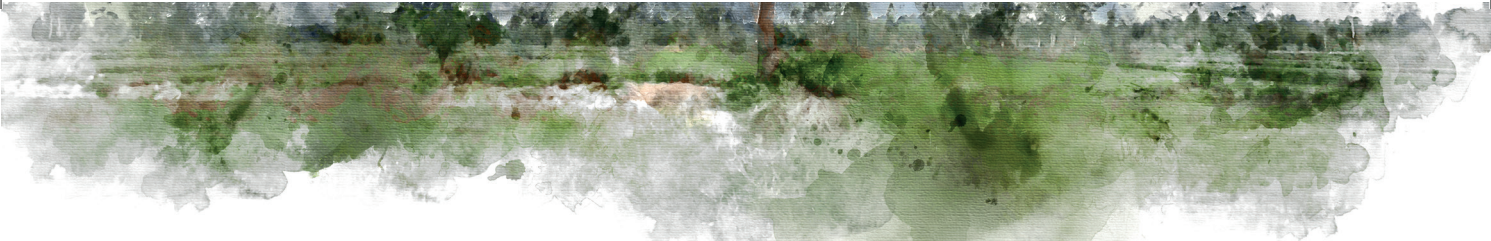
Since ISFR 2003, the biennial surveys also include Trees Outside Forests (TOF) as a category. In this category, tree cover includes patches of trees and isolated trees on areas less than one hectare. So, while “forest cover” is defined as all areas, irrespective of ownership, that are more than 1 ha and have more than 10 per cent tree cover, TOF is the count of trees outside forests, irrespec-

VOLUME OF TREES

India's forest stock inside and outside recorded forests in 2021



Source: India State of Forest 2021



COUNT AND ADD

Almost a quarter of India is under forest cover if trees outside forest are counted

328.74 million hectare total geographic area of the country

Trees outside forests (ToF*) and forest cover# inside and outside recorded forest area (RFA^)

29.32 million ha (8.9% of India's total area or **36%** of its green cover)

9.6 million ha ToF
19.72 million ha Forest cover outside RFA

71.38 million ha Total forest cover 2021
(**24.6%** ToF and forest cover inside and outside RFA as % of India's area)

*ToF: patches of trees and isolated trees on areas less than 1 hectare; #Forest cover is all land of more than 1 ha with over 10% tree canopy density; ^RFA: All areas recorded as "forests" in government records, and consists of Reserved Forests and Protected Forests; Source: India State of Forest Report 2021

tive of the size of the patch. These scattered trees are assessed using high resolution data and from field inventory data, and altogether make up close to 10 million ha of land area (see 'Count and add'). In this way, in 2021, forests and trees outside recorded forests added up to become 8.9 per cent of the country's area and almost 36 per cent of the green cover of the country.

FOREST STOCK TOO GROWING MORE OUTSIDE THAN INSIDE

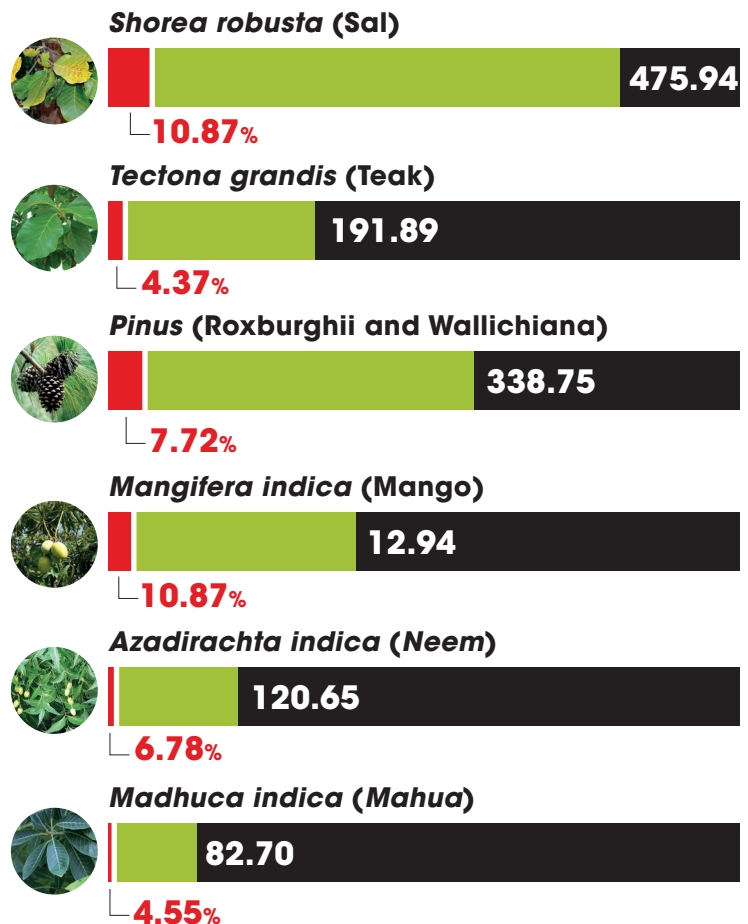
The estimation of forest stock is the volume of all living trees in a forested area. It is a critical indicator to measure sustainability—productivity of forests—and also the basis of calculating biomass and carbon stock. ISFR 2021 has calculated the growing stock based on 18,218 sample plots inside forests and 41,630 sample plots outside. It says there is a 4 per cent increase in the growing stock in the country as compared to 2019, of which the bulk is from forests outside the recorded area—of the total increase of 251 cubic metres, 137 cubic metres is from forests outside. What is important is that when compared in terms of growing stock, the land with trees outside forest is more productive (61.35 cubic metres per ha) than that in the recorded forest (56.60 cubic metres per ha). (See 'Volume of trees').

You could still argue that all is well on India's forest front. Really? Read on.

TOP GROWERS

Stock of main trees in India's forests

■ Total volume (cubic metre) ■ % of total growing stock of trees



Source: India State of Forest Report 2021

Paper forests

Missing forests and by 25.87 million of hectares

The very bad news is in the unsaid. A total of 25.87 million ha of recorded forest area—forest land under the control of state government’s forest department—is not accounted for in the “India State of Forest Report 2021”. It just does not exist anywhere in the report. There is no assessment in terms of its coverage. Does this land exist? Is it encroached upon? Or is it just degraded; so degraded that no forest can be counted here? This is India’s forest area—land classified as forests; land which is out of bounds for all other purposes than to grow trees on. Should this not be elaborated upon?

This is the real story of the state of our forests. And this is what we must understand and fix. Let me explain.

There is a difference between “recorded forest area” and “forest cover”. According to the ISFR 2021, the recorded forest area in the country is 77.53 million ha, which is some 23 per cent of the country’s geographic area. But the total forest cover is 71.38 million ha.

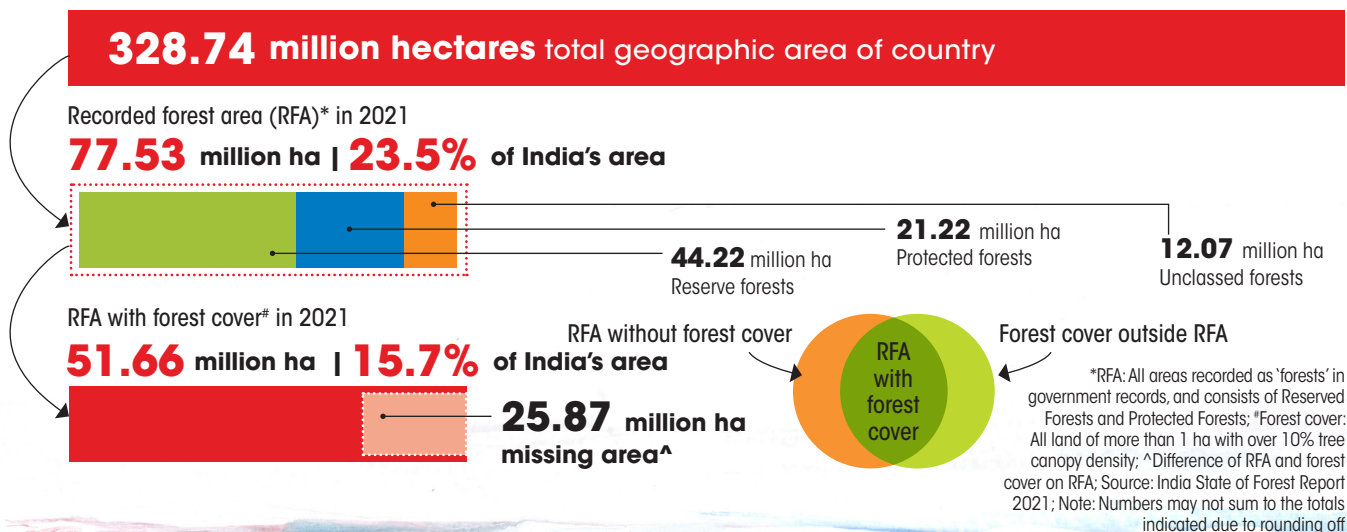
This is a difference of more than 6 million ha—not so significant, one might say. But this is not true. The difference adds up to 25.87 million ha—bigger than the size of Uttar Pradesh. And this is where the story of missing forests begins to unravel.

The recorded forest area is under different legal classes of forests—reserve, protected and unclassified (see ‘Overall numbers’). Over the past three decades, this recorded forest area has remained more or less the same.

But forest cover is the actual area where there are forests. This is defined as all land of more than one hectare with over 10 per cent tree canopy density. This could be very dense forests, moderately dense forests and open forests. In addition, there is “scrub”, which is forest land with canopy density less than 10 per cent and non-forest land that is not included in any of the above classes. So, you would expect that the total recorded forest area under the forest department—77.53 million ha—would get accounted in these different categories of forest: very

OVERALL NUMBERS

A massive 25.87 million ha forests, or one-third of India’s recorded forest area, has not been assessed in the government’s latest survey

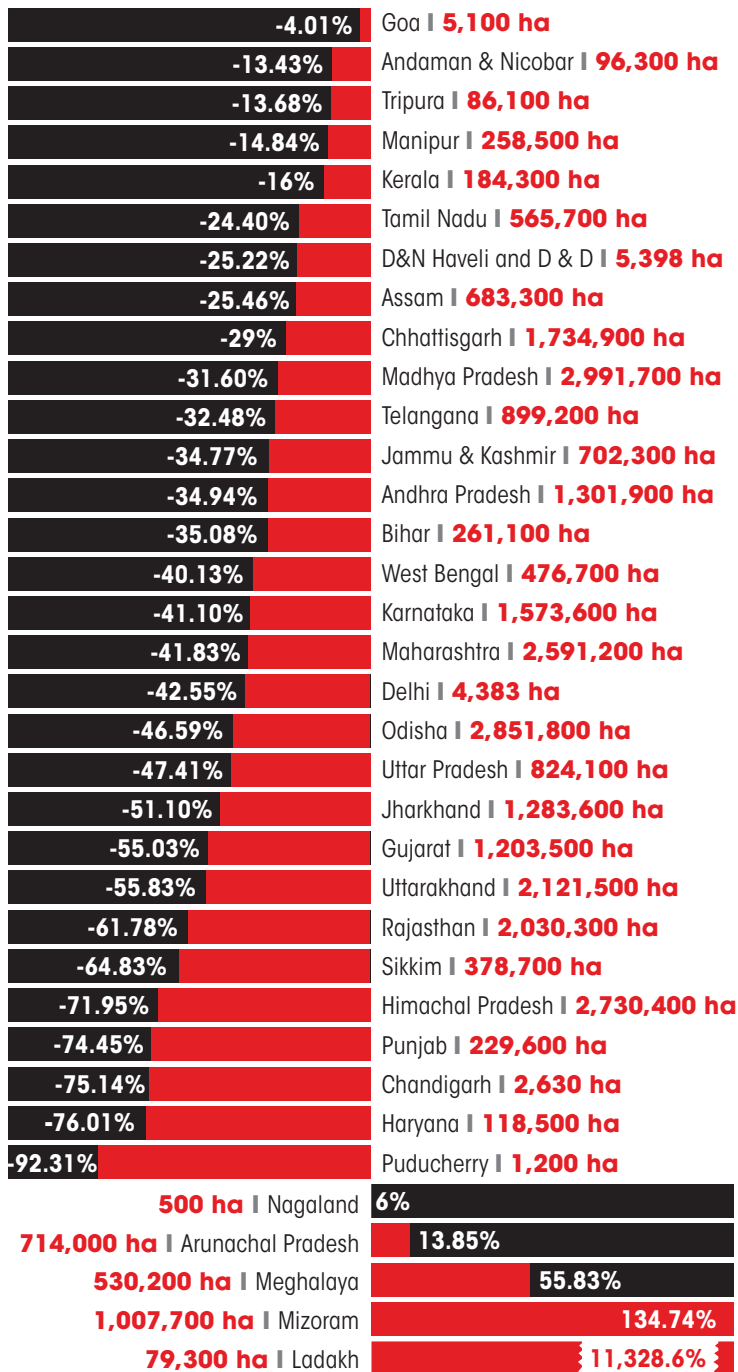


PRIME LOSERS

State-wise break-up of 25.87 million ha forests gone missing from the government's latest assessment

■ Missing forest cover* as % of the state's recorded forest area#

00 Missing forest cover (in hectare) from recorded forest area



*Missing forest cover is the difference of recorded forest area (RFA) and the forest cover on RFA; Forest cover: All land of more than 1 ha with over 10% tree canopy density; #RFA: All areas recorded as "forests" in government records, and consists of Reserved Forests and Protected Forests; Source: Down To Earth analysis based on India State of Forest Report 2021

dense, moderately dense, open or scrub. But it is not so.

According to ISFR 2021, only 51.66 million ha of the recorded forest area—the area under the forest department, classified as forests—has forest cover. This means we have the assessment for only 66 per cent of the recorded “forest” area. The rest is unaccounted for. Only in one passing reference, almost as if by mistake, does ISFR 2021 mention that this is “recorded forest without forest cover”. This land is not even classified as “scrub”.

ISFR 2021 mentions that roughly 4 million ha is classified as scrub, but it is not clear if this is within the recorded forest area or outside. In this way, the assessment completely misses out on explaining what is the state of land under the forest department, which is not included in the forest cover (see ‘Overall numbers’ on p32).

The size of this missing 25.87 million ha of forest is massive. This then is the scale of forest degradation in the country. So, let's get real. Let's get tough on the need for forest regeneration.

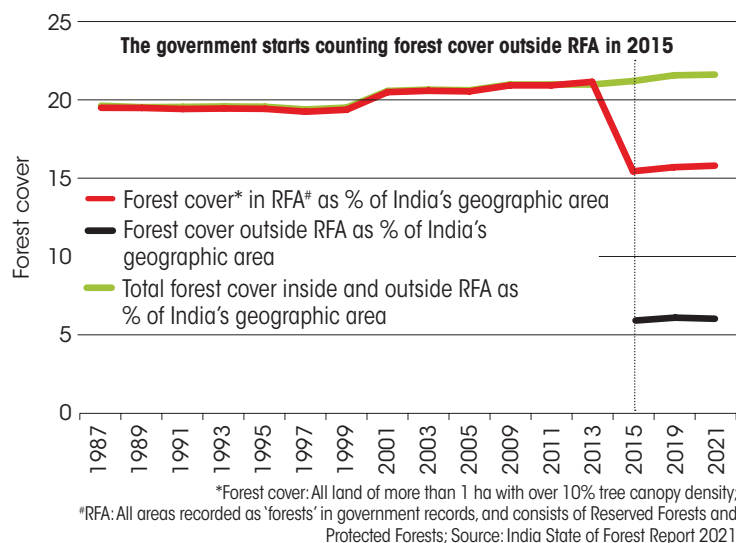
LAND BUT NO FOREST?

If you dive deeper to understand where these “missing” forests are, it becomes clear that large swathes of land under the forest department in key forested states are in this list. Forested Madhya Pradesh is missing 3 million ha—the difference between recorded forest area and forest cover is close to 32 per cent; in Jharkhand the difference is over 50 per cent. Even if it can be said that this difference is because of uncultivable forest land in the snow covered areas of high Himalayas, it cannot be the case for the bulk of this “missing” and deforested land. More importantly, if this land was “scrub”, with little or no vegetation, it should have been accounted for as such.

Also, in some cases, mostly in the northeastern states of Arunachal Pradesh, Mizoram, Meghalaya and Nagaland, ISFR 2021 has higher forest cover in the recorded area, as compared to the area under the state forest department. In these states

MANUFACTURED EQUILIBRIUM

With forest cover in recorded forest area (RFA) falling, the government starts to count forests outside in 2015



forests are mostly under community control, and so, technically, the forests are outside the area of recorded forests.

HOW 25.87 MILLION HA GOT LOST

There is no explanation provided in ISFR 2021 on this massive discrepancy—and only in passing does it say that this is recorded forest without forest cover. It only states that “most of the recorded forest area has vegetation cover on it, yet there are blanks and areas with density less than 10 per cent”. It does not state that these add up to 25.87 million ha—or one-third of the recorded forest area.

This lack of attention to the state of forests under the forest department is inexplicable. This when, the Forest Survey of India (FSI) has received digital boundaries of recorded forests from 24 states and Union

THROUGH THE DECADES

India's very dense forests occupy a quarter of what they did 30 years ago, but the country's total forest cover is the same due to growth outside recorded forest area

00 in million hectare

	Recorded forest area (RFA*)	Dense forest Over 70% canopy cover	Moderately dense 40-70% canopy cover	Open forest 10-40% canopy cover	Mangrove	Total forest cover#	Forest cover outside RFA	Scrub: less than 10% canopy cover
1987	75	36	-	28	4	64	-	-
1989	75	37.8	-	26	4	64	-	-
1991	76.5	38.5	-	25	4	64	-	6
1993	76.5	38.5	-	25	4	64	-	6
1995	76.5	38.57	-	25	4.5	64	-	6
1997	76.5	36.73	-	26	4.8	67	-	5.7
1999	76.5	37.74	-	26	4.9	64	-	5
2001	76.5	41.68	-	26	-	68	-	4.7
2003	76.5	5.3	34	29	-	69	-	4
2005	77	5.5	33	29	-	68	-	3.8
2009	77	8.3	32	29	-	69	-	
2011	77	8.3	32	29	-	69	-	4.2
2013	77	8.4	32	29	-	70	-	4.1
2015	77	8.6	24	19		51	19	4.1
2019	77	8.7	24	19	5	51	20	4.6
2021	77.5	8.8	24	19	-	52	20	4

*RFA: All areas recorded as "forests" in government records, and consists of Reserved Forests and Protected Forests;
 #Forest cover: All land of more than 1 ha with over 10% tree canopy density; Note: Figures analysed from State of Forest Reports

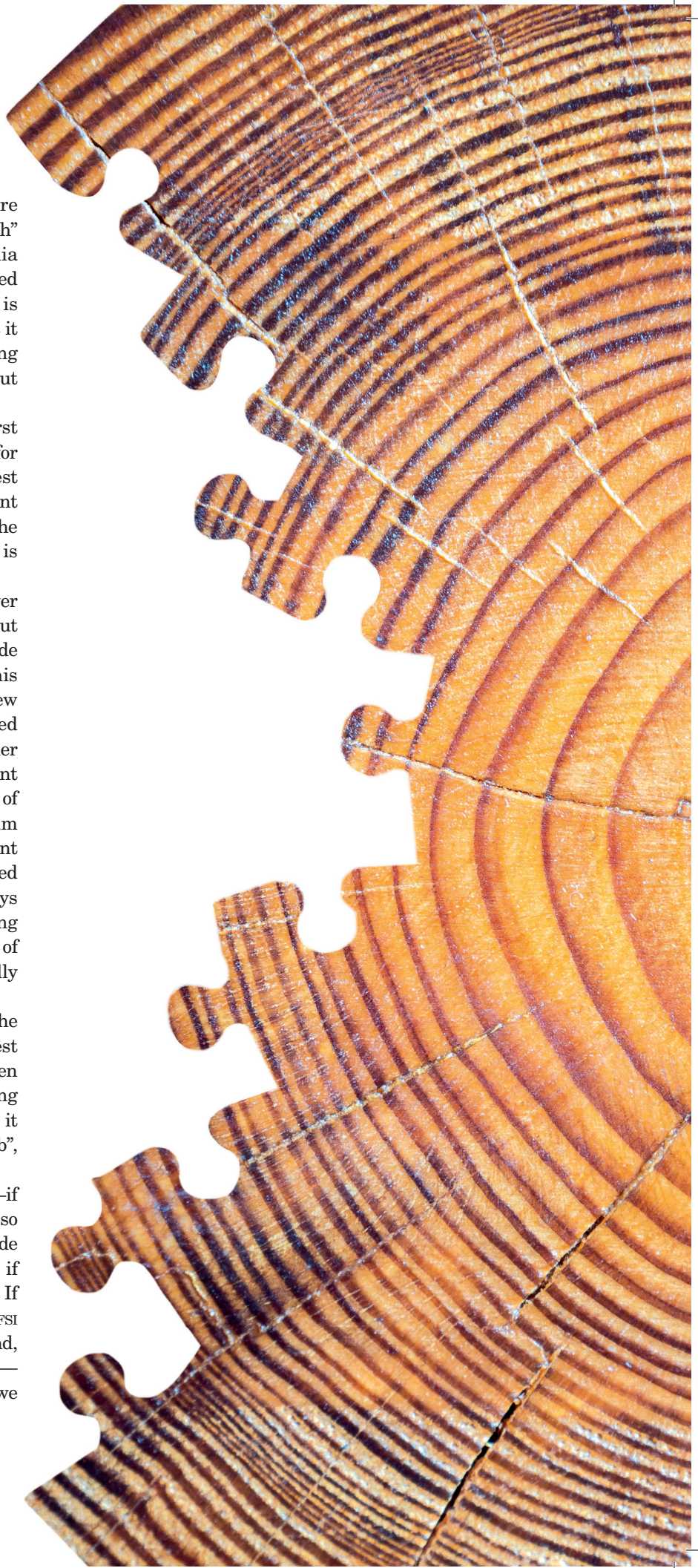
Territories. Where digital boundaries were not available, it has used the “greenwash” (area shown in green in Survey of India topographical sheets) as a proxy for recorded forest areas. This would imply that there is a clear identification of this land and that it would be possible to use remote sensing combined with ground-surveys to map out the current state of its affairs.

An analysis of this from the very first “State of Forest Report in 1987” shows for last three decades, the area in state forest records has remained constant—23 per cent of the land. But what has changed is the analysis of how much of the forest cover is inside and outside this recorded forest.

From 1987 to 2015, the forest cover added up to 20-21 per cent of the land—but it did not specify if this was inside or outside the forest area of the country. In 2015 this changed, when the report added a new category of “forest cover outside recorded forest area”. Then the covered area under the recorded forests dropped to 15 per cent of the country’s land and the balance area of forest cover was shifted to outside. The sum remained the same—roughly 21.6 per cent of India’s area. It could therefore be argued that this “missing” forest was always missing. The satellite and ground-truthing assessment could not identify if this area of forest cover was outside or inside the legally defined areas. It has now been corrected.

But that still does not answer the question. What is the “state” of the forest land which is specified for use for green cover? What is the forest department doing about this one-third of its land? And if it does not even qualify to be called “scrub”, then what is its state?

This could be forgotten—written off—if the size of this missing forest was not so massive. It is not possible to brush aside almost 26 million ha. This is land, which if available, should be used for growing trees. If the remote sensing technology, used by fsi can count individual standing trees on land, it certainly can assess the state of this land—recorded as forest on paper. Otherwise, we have paper forests, not real ones.



Agenda: Forests for real

We need fifth-generation forest reforms that will secure forests for growth and livelihood

The big picture from the “India State of Forest Report 2021” (ISFR 2021) is this: India’s forest cover has increased between the last assessment in 2019 and the latest in 2021 by a minuscule 0.16 million ha—a rise of mere 0.2 per cent. This is not boast-worthy, not even noteworthy.

The increase in forest cover has happened outside recorded forest area, or forest land under the control of state government’s forest department. This growth has also happened mainly in forests that are categorised as “open”—forests with canopy cover between 10 and 40 per cent. This shows that forests are growing because people are planting trees on their individual lands, and are planting non-forest species, since there are huge restrictions on planting and felling trees listed in the Indian Forest Act, 1927. These forest lands would thus include plantations of rubber, coconut, eucalyptus and even tea and coffee, which have tree cover of 10 per cent or more in any hectare of land.

The area “outside” the recorded forest is now a substantial portion of the green cover of the country. The forest cover “outside” recorded forest area is 19.72 million ha or roughly 28 per cent of the total forest cover. Now, add to this the tree cover count of 9.6 million ha. It aggregates to 29.32 million ha, which is as much as 36 per cent of the green cover of the country. This land outside recorded forests also contributes to 38 per cent of the forest sinks in the country, according to the Forest Survey of India.

The tree cover (trees outside recorded forest area)—scattered in individual plots—is close to 10 million ha, which is equivalent to the area under the very dense forests in the country. Mango, neem, *mahua* and

tamarind are most important trees—species that provide livelihood benefits to their growers. Very dense forests, with canopy cover of over 70 per cent, are now just 14 per cent of the forest cover (or 3 per cent of the country’s land area). Of this, 70 per cent and more are found in districts classified as tribal.

Most importantly, vast areas of the country’s recorded forest does not find any mention in the report. This area is as much as 25.87 million ha—one-third of the land under the state forest department. The biggest takeaway is, therefore, that forests with forest departments are not growing; and one-third of their land is not even fit for assessment. *Forest cover is growing in spite of the government, not because of it.*

REINVENT FORESTS FOR FUTURE

ISFR 2021 should make it clear that we need to rework our forest strategies urgently. We need fifth generation forest reforms (5-G forest reform), which will secure forests for growth and livelihood.

Forest management started in India with the colonial British government, which took away community lands and nationalised them. The forests were meant for extraction to aid the colonial government’s economic exploitation of the country’s resources. The first phase of post-Independent India continued this extractive system. The second phase started in the 1980s, when the Forest Conservation Act and its subsequent amendments were passed, centralising the “diversion” of forest land. The push for this was the growing awareness of the rate of deforestation in mid 1980s.

The third phase came with the mission for afforestation—first it was about growing

trees outside forests, in the wastelands that were thought to exist across the country. Soon it became clear that the real wasteland was in the lands controlled by the forest department. It also became clear that survival of the trees required people to keep their livestock out of the afforested wasteland—it required villages to protect the land and to be partners in afforestation. Thus started the Joint Forest Management (JFM), under which local communities would get usufruct rights to forest produce like grass and would guard the land in return so that forests grow. JFM did not succeed because it was a scheme in which state forest departments remained unwilling participants. The forest department showed up only when the trees, protected over the years, were ready for harvest. As part of the agreement, money was to be transferred to the village community. But as has been documented in cases from across the country, the final cheque paid for the forest produce was for such small amounts that it was a joke on the community. It broke trust of people. It destroyed a movement to grow trees and then to fell those so that they could be grown again.

The fourth phase continues till today where forests are a permanent battle ground. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (FRA), 2006, has corrected a historical injustice, giving communities rights over land they have been living on. According to data from the Union Ministry of Tribal Affairs, till February 2022, some 1.71 million ha of forest land was “settled” as individual rights to people. But there is little attention to the need to afforest these lands and more. This in spite of the fact that we have all the grandstanding announcements of Green India Mission and the funds collected through payments for compensatory afforestation. In reply to a Parliament question in 2020, the Union Ministry of Environment, Forest and Climate Change said that the Compensatory Afforestation Fund Management and Planning Authority, that works under the ministry, has transferred

KNOW YOUR STOCK

Carbon stock increase too is in trees outside forest

CARBON STOCK. This is different from growing stock as it calculates the amount of carbon stored in biomass—in woody growing stock, in vegetation, in leaf litter and soil. According to ISFR 2021, initially Forest Survey of India (FSI) had only calculated the woody growing stock and extrapolated the vegetation to estimate forest carbon. Then for India’s Second Communication to the United Nations Framework Convention on Climate Change, it conducted the greenhouse gas inventory from the period 1954 to 2004. It estimated the greenhouse gas flux—the net changes in carbon stock over time. Since the launch of the National Forest Inventory in 2003, FSI has been estimating growing stock and carbon stock in different carbon pools.

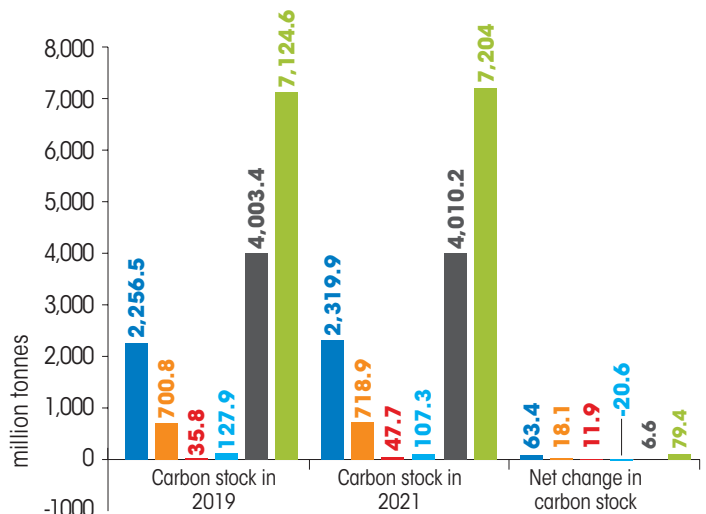
The carbon stock is estimated for vegetation—including soil and forest floor—in recorded forest and trees outside forests. According to ISFR 2021 there is a net increase of 79.4 million tonnes in carbon stock between 2019 and 2021. What is interesting is that the biggest decrease in carbon stock has come from leaf litter and increase in above ground biomass. This again would suggest that the carbon stock increase is in trees outside forests.

What is also important is that the bulk of the carbon stock—56 per cent—is in the soil as per this assessment. The report also states Trees Outside Forest (TOF) is 8.94 per cent of the country’s geographical area and nearly 38 per cent of the carbon stock.

GROWING STOCK

India’s forest cover has remained largely same

- Above ground biomass (tree stock)
- Below ground biomass (ratio between above and below ground biomass)
- Dead wood ■ Litter ■ Soil ■ Total



Source: India State of Forest Report 2021

close to ₹50,000 crore to states for planting trees. There is no report card on the trees planted and their survival rate. IFSR 2021 should make it clear that little “forests” have grown on these governmental lands.

So, it is time for reworking and reimagining the forests for the 5-G reforms. This in times when, on the one hand, there is a need for enhanced protection of the remaining forests for ecological security, and on the other, there is a crucial need to build resilience of communities who live in these habitats—all in the times of increased risk because of climate change.

The 5-G forest reforms should be based on the learning from the past—we must shed reticence to plant what will be cut. The fact is that while the first phase of forest management in the country was extractive and exploitative, this 4th phase continues to be based on conservation to the extent that felling trees planted on one’s own land has become a crime. Today, India has to import much of its wood products, and according to a recent report by the International Tropical Timber Organization, a Japan-based intergovernmental organisation, this is often sourced from illegally cut forests in Africa and other nations. This clearly does not speak well for a country that has set aside 23 per cent of its land for forests.

So, the future agenda for forests must be:

AGENDA 1
PROTECTION OF THE REMAINING VERY DENSE AND ECOLOGICALLY SIGNIFICANT FORESTS IS CRITICAL

We cannot afford to lose even a hectare of this high quality and biodiverse forests. Therefore, forests for highest level of protection should be identified and this data be made available so that clearance is not granted for projects in such areas.

It is equally important to recognise that

the bulk of these very rich forests are found in the habitats of the poorest people in the country. This means doing much more to build strategies for ecological payments to the communities that co-exist on these lands. They must benefit from this protection, not be worse off, because these lands are important for conservation.

The cartography of India—the map where the tiger roam, the dense forests exist, where minerals are found, where rivers come from, but also where the poorest, most marginalised live—must change. This can only happen if we make people partners in conservation and not dismiss them as “biotic pressure”.

In 2002, the 12th Finance Commission set up an incentive-based grant, as per the area of forests in the state, to reward the states for conserving forests. The 14th Finance Commission made this “grant” unconditional, which means the states are free to use it as they want, but nobody really knows where it comes or goes. It seems the idea of ecosystem payment for conservation, has been lost. This payment needs to be given to communities that live near the protected, high-value forests. This payment is for ecological services rendered because conservation is happening in their backyard and at their cost. It also means that we need to put a real value on these forests, which are today key for biodiversity conservation as well as carbon sequestration.

AGENDA 2
PLAN TO CUT AND PLANT AGAIN ON FOREST LAND WITH COMMUNITIES

The reason vast areas under the forest department remain degraded is that they are also habitats of people and their livestock. This is why planting trees needs involvement of communities. FRA has a

We need fifth generation (5-G) forest reforms, which will secure forests for growth and livelihood. These reforms should be based on learning from the past

Trees are like bank accounts. One generation plants it for exigency and another harvests it. Now this has been demonetised or nationalised

provision for community forest management and it is time the states made it work. But for this to happen, trees will need to be cut and then planted again, and this means making a business of the minor and major forest produce. Felling of trees is not the problem; the problem is our inability to replant and to regrow them. This is what needs to be fixed. It is time we brought back the saw-mills so that wood can be used to replace cement or aluminium or steel in housing and in furniture. We need a wood-based future. This is good for climate change and if we do this in ways that benefit the communities, then it is good for their livelihoods and for building local economies.

AGENDA 3 END THE LICENSE-RAJ ON TREES OUTSIDE FORESTS

ISFR 2021 shows that people are planting trees on their lands, but what is not said is that this plantation is happening against all odds. Under the restrictive conditions that operate in India today, it is literally a crime to fell a tree even if you have planted it on your own land. People do not know if they will get permission to harvest it, transport it or sell it. Under the Indian Forest Act 1927, timber or other produce derived from trees outside forests are treated as forest produce. This is not all. State governments have added to this through their own Acts that govern felling and transit of different tree species. Today, it is a task riddled with high transaction costs and harassment. The fact is trees are like bank accounts. One generation plants it for exigency and another harvests it. Now this bank account has been demonetised or nationalised.

ISFR 2021 includes a fascinating assessment of the state of bamboo resources in the country. It estimates that there are 53,336 million bamboo clumps in the country, up

from 13,882 million in 2019. The bamboo bearing area is estimated to be 15 million ha—roughly 20 per cent of the forest cover in 2021. But the potential of this resource remains unutilised because of all the restrictions that come with cutting and transporting trees. After much discussions, the India Forest Act, 1927, was amended in 2017 to remove bamboo from the definition of tree to remove restrictions on its felling and transit in non-forest lands, but the progress is slow.

Foresters argue that this protection is needed since it is not possible to distinguish between trees grown inside or outside the forest. But as ISFR 2021 makes it clear, it is trees outside the forest that are today making the country green. It is time to rework the law to make this happen at scale.

India's tryst with forests started with the Chipko movement, when women living in the high Himalayas "hugged" trees to stop the felling by woodcutters. But we misinterpreted the movement. The women stopped the felling, not because they did not want the tree cut, but they wanted the right to decide when the tree would be felled. They knew their survival was intrinsically linked to forests—they needed these lands for fodder and for water conservation (and even for the privacy to defecate, as they told me when I travelled to them in the early 1980s). But we heard half the message—it got truncated by the time it was relayed to the corridors of power in the plains. We heard that trees had to be protected at all costs; not that we needed to build a sustainable future that would be based on the utilisation of wood for local economies.

So, it is time we understood that all this is only possible when protecting and growing trees becomes a business that benefits people who live on the forest lands. Otherwise, the "missing" forest land will remain forest on paper only. [DTE](#) [@sunitanar](#)